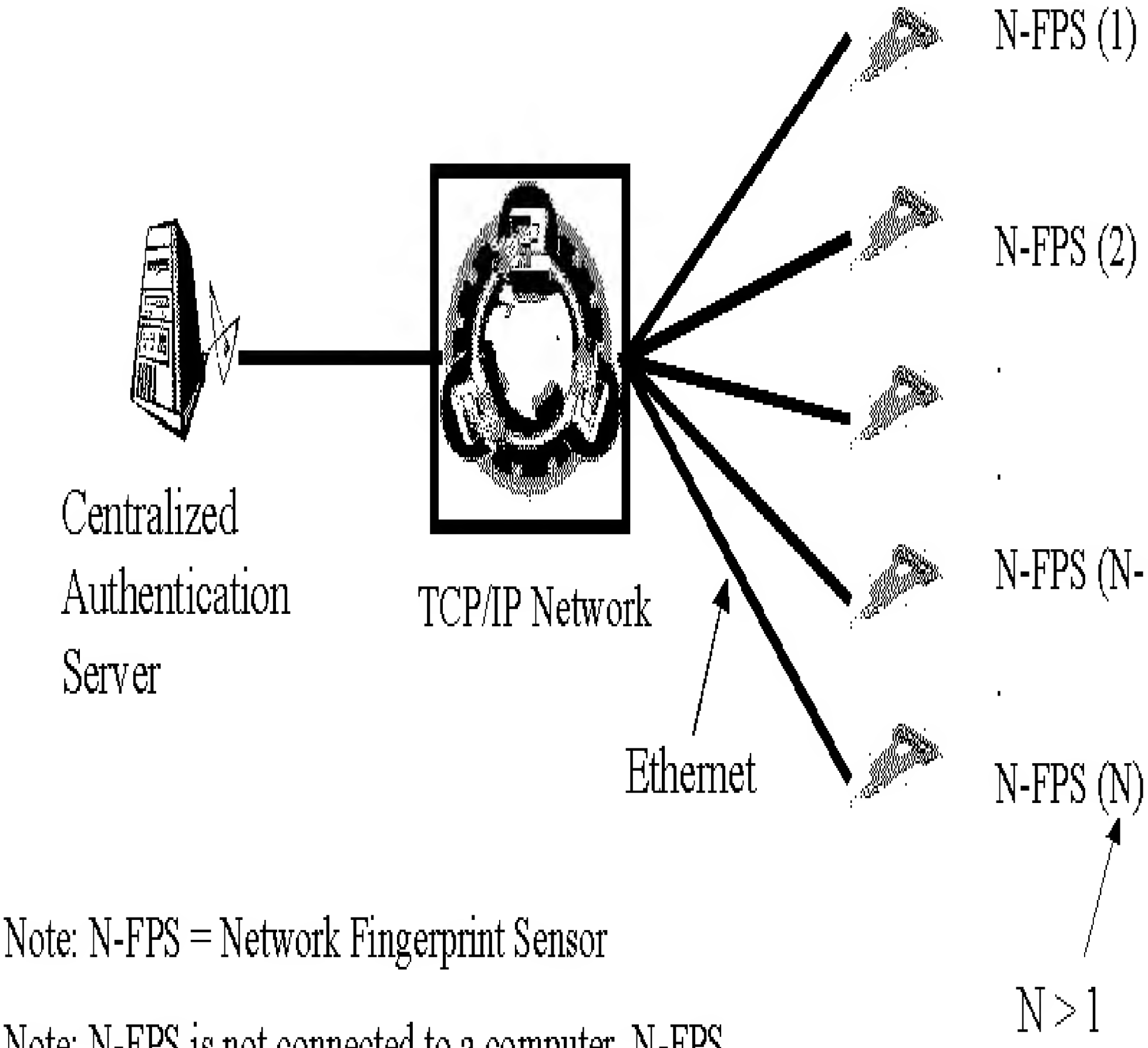
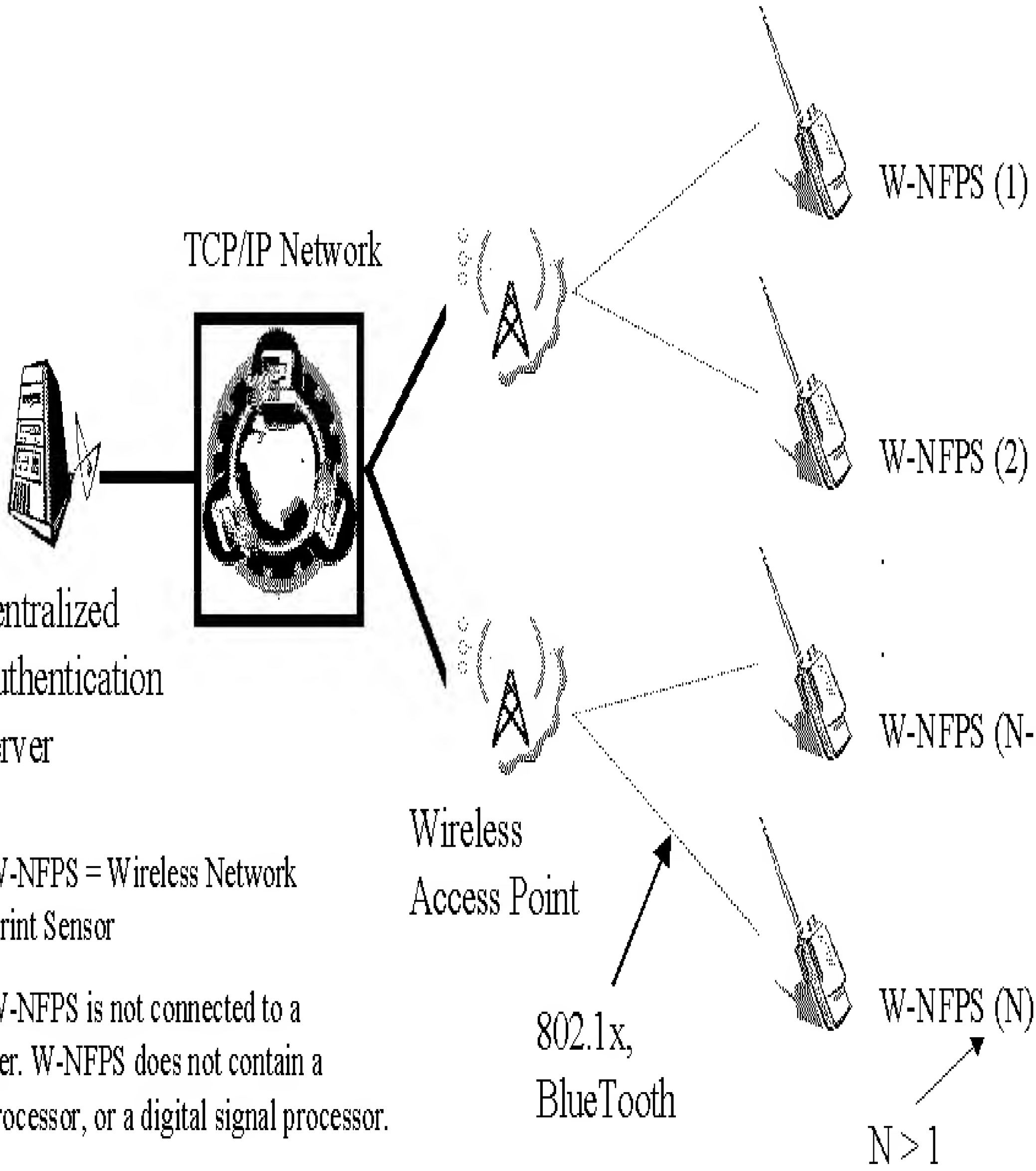
Figure 1: Network Fingerprint Sensor Authentication System



Note: N-FPS = Network Fingerprint Sensor

Note: N-FPS is not connected to a computer. N-FPS does not contain a microprocessor, or a digital signal processor.

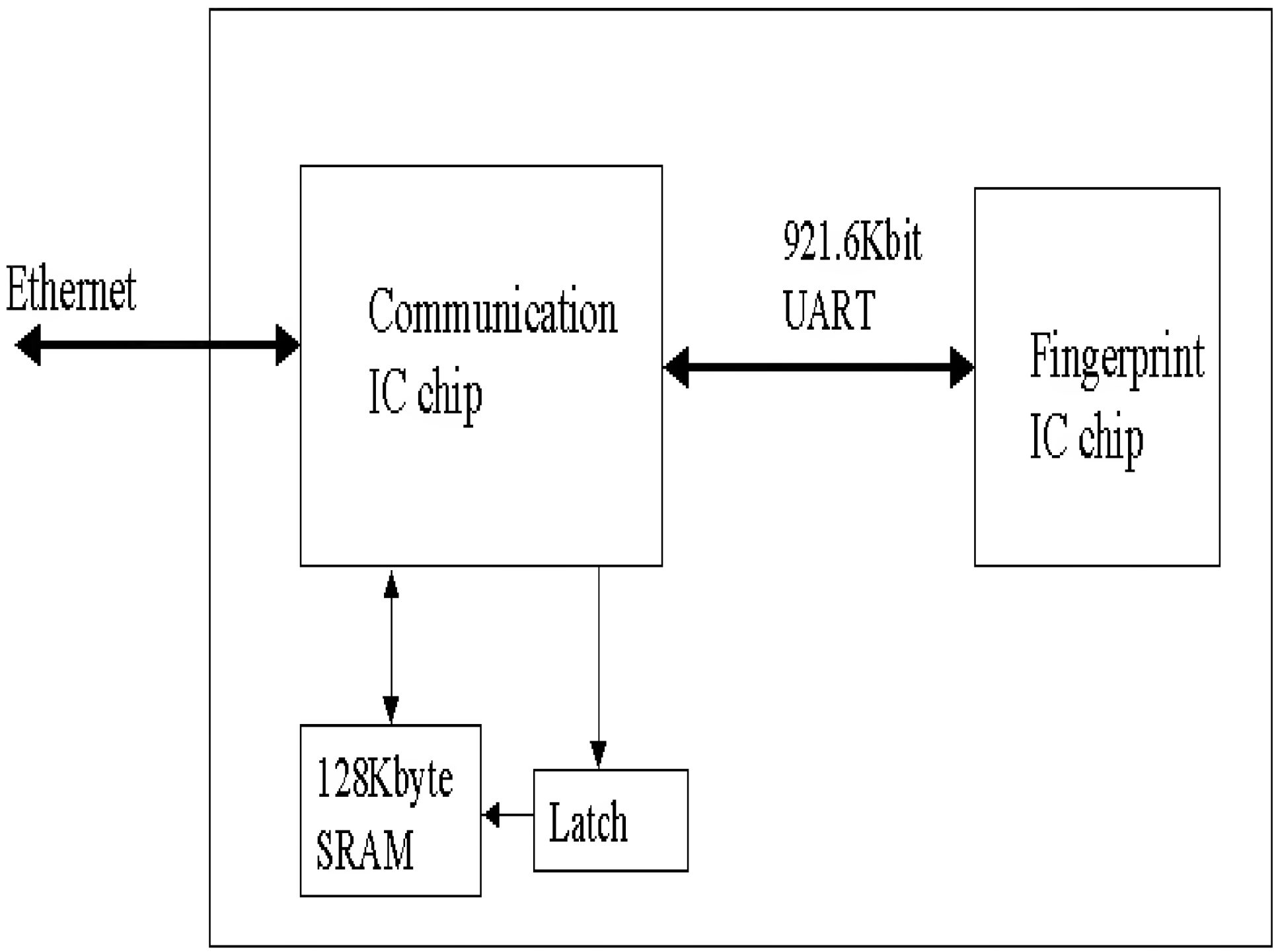
Figure 2: Wireless Network Fingerprint Sensor Authentication System



Note: W-NFPS = Wireless Network Fingerprint Sensor

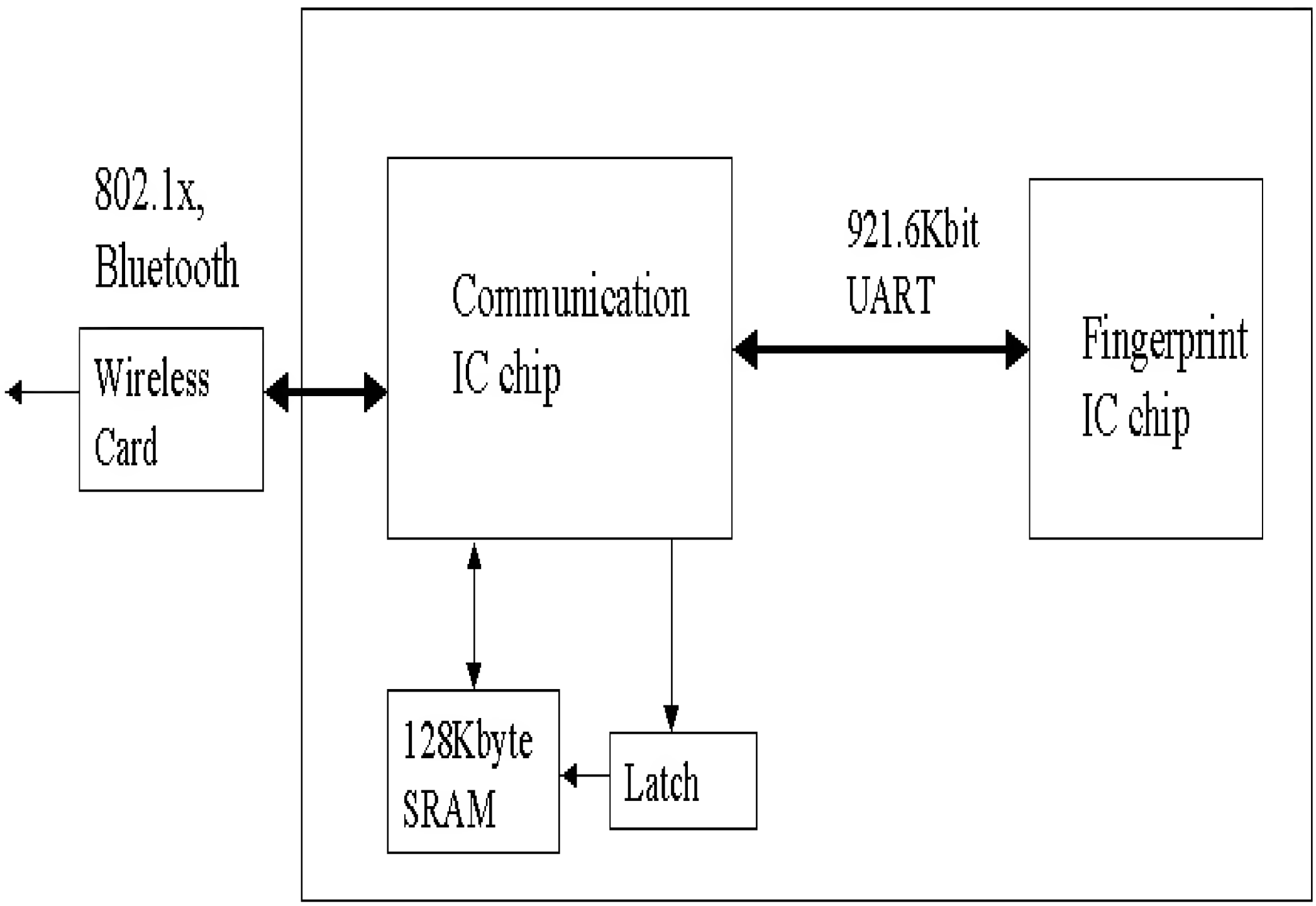
Note: W-NFPS is not connected to a computer. W-NFPS does not contain a microprocessor, or a digital signal processor.

Figure 3: Block Diagram: Network Fingerprint Sensor



Note: 128Kbyte SRAM and Latch are not required

Figure 4: Block Diagram : Wireless Network Fingerprint Sensor



Wireless network communication segment

Fingerprint sensor IC segment

Note: 128Kbyte SRAM and Latch are not required

Figure 5: Network Fingerprint Sensor Flow Chart

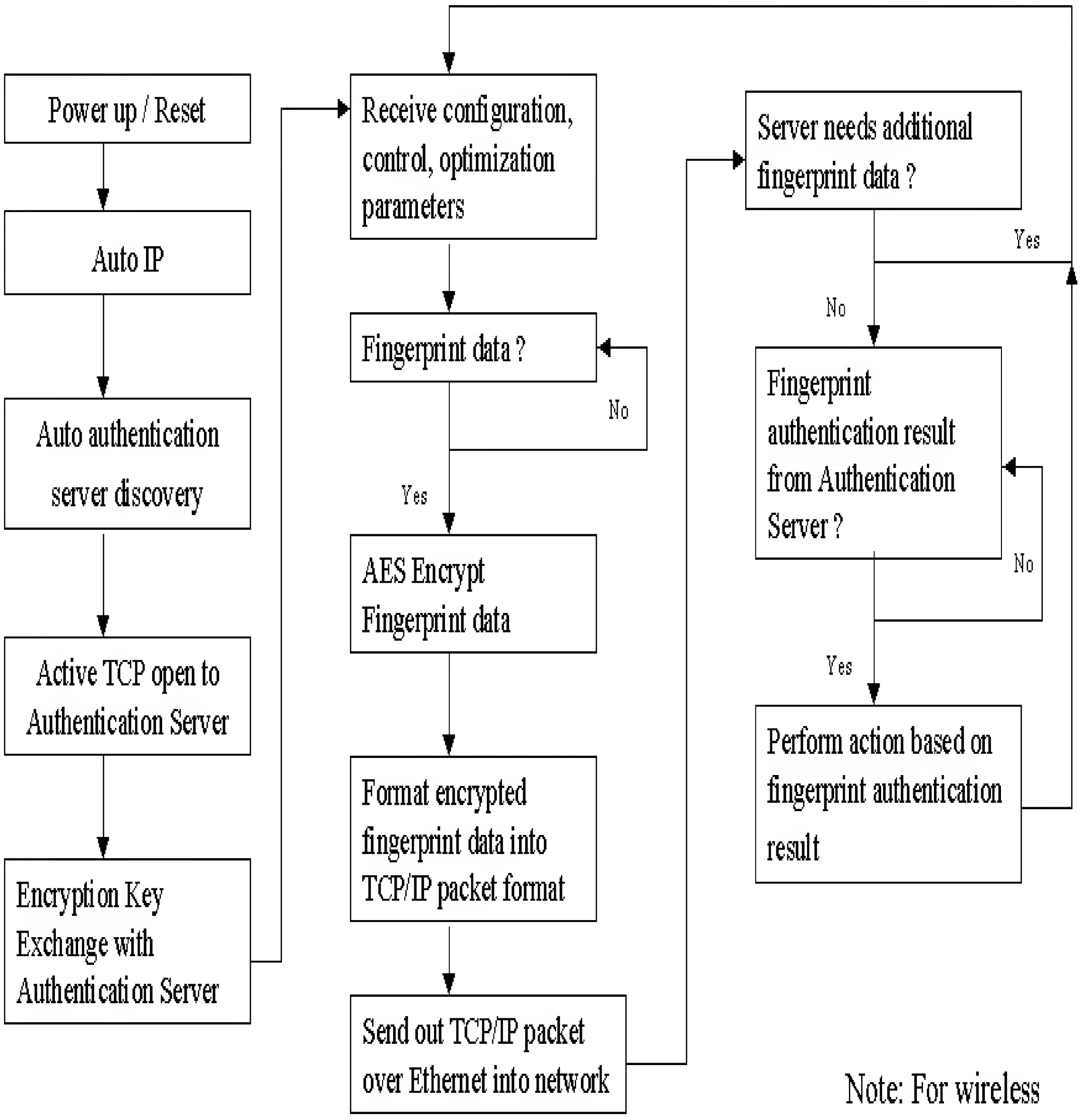


Figure 6: Authentication Server Flow Chart

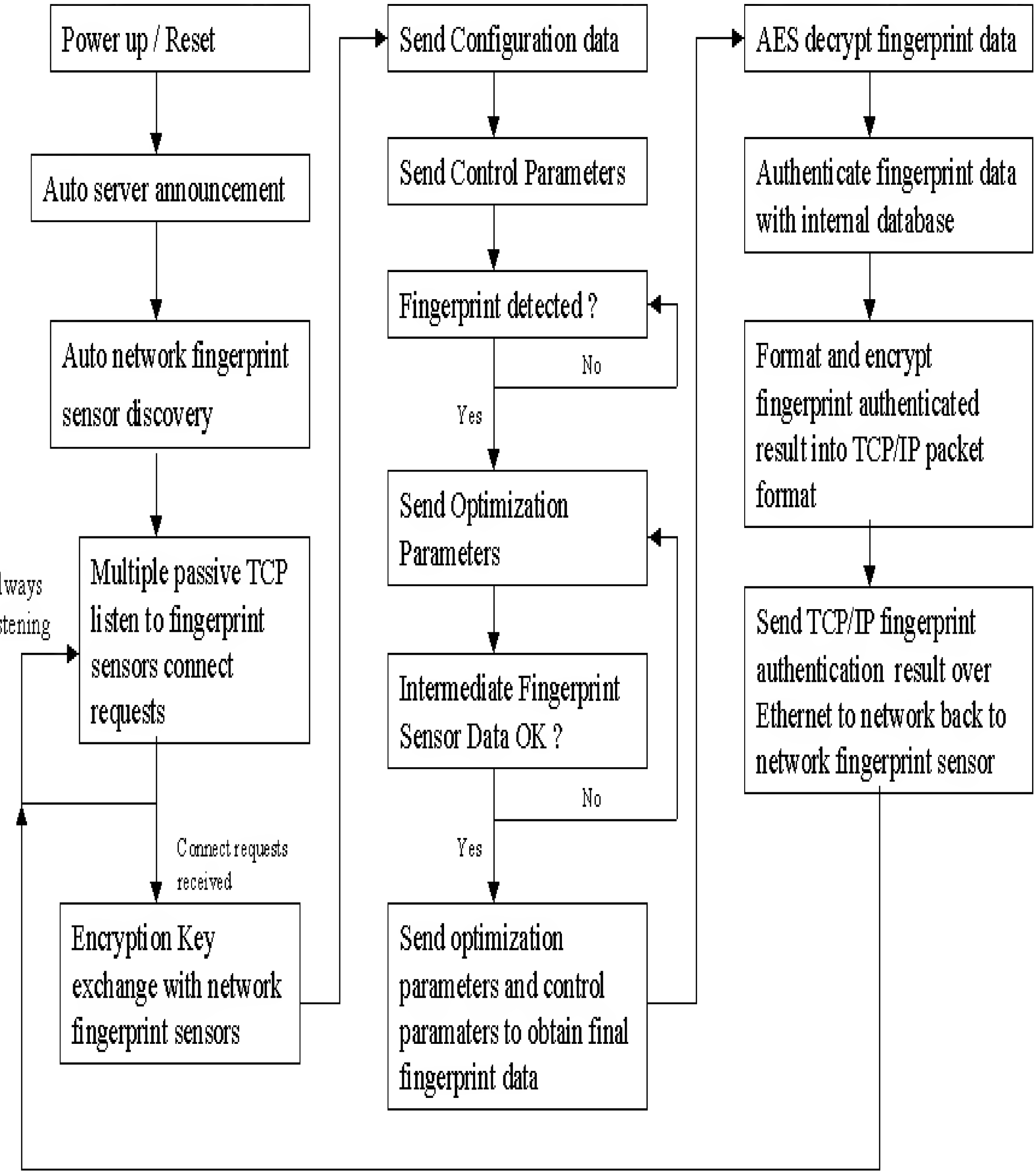


Figure 7: Communication Flow Chart between Authentication Server and multiple Network Fingerprint Sensors

Authentication Server | Multiple Network Fingerprint Sensors

Auto discovery of network fingerprint sensors→

<-Auto discovery of Authentication Server

<-Requests TCP connection to socket number

TCP connection granted->

<-Requests encryption key exchange

Start encryption key exchange->

Send configuration data to network fingerprint sensor->

<-Send fingerprint IC configuration identifiers

Fingerprint IC type recognized, send optimization parameters->

Request fingerprint data if available ->

<-Send fingerprint image and template

Multiple times of send optimization parameters,
request additional fingerprint image and template ->

<-Send additional fingerprint image and template

Send fingerprint authentication result ->